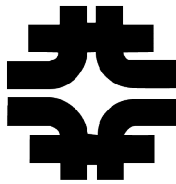# Run II DAQ Support And Developmment (Software) Project Status Update for 9/05/2006

Gerald Guglielmo

(CD/CEPA/OAA)

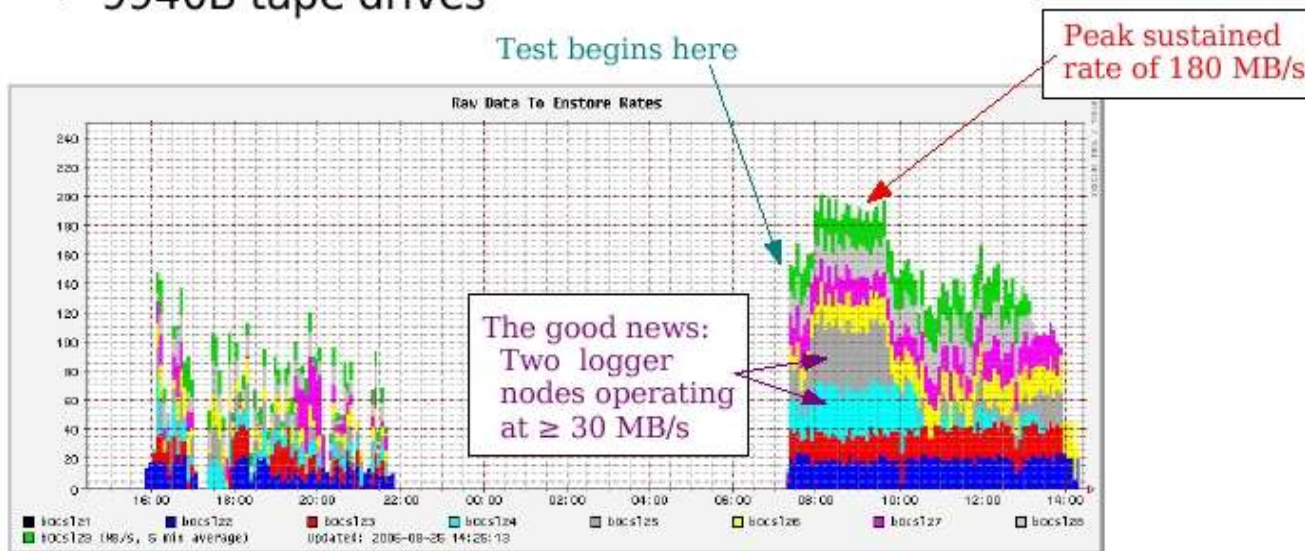# Project Deliverables Status for CDF

- CDF
  - SEVB and Merlin front line support transitioned to experiment
    - Consultation basis and guidance being given (~February 2006)
  - CDFRDL
    - Still in development and testing phase not support (*REXX provides front line support?*)
    - RDL running on Upgrade Production Hardware (completed 06/30/06)
    - Full BW with RDL & CSL 07/10/06 (completed 08/25/06)
    - 80 MB/s aggregate for 8 nodes to Mass Storage (nominal) 08/25/06
    - 30 MB/s single node to Mass Storage (nominal) 08/25/06
    - 1.5 times above rates for recovery of backlogs
    - CSL Upgrade readiness review 08/28/2006
    - Integration testing mid-September (roughly on schedule)
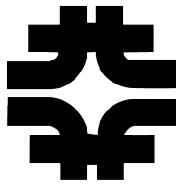   - Migration to Production Fall06 (October – November)

Project Deliverables Status for CDF (Cont.)
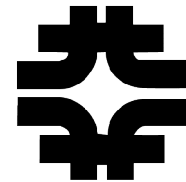
- CDFRDL full bandwidth tests on 08/28/2006 (plot from R. Snider talk)
    - Peak sustained rate requirement achieved
   - Single node rate requirement achieved (2 tape drives)

Project Deliverables Status for D0

- D0
  - Provide backup monitoring and issue intervention when necessary (REXX provides primary)
  - Collector/Datalogger/ITC/Dlsam/Dlcat/DSM/Distributor
    - Dlsam/Dlcat updates in CVS based on bugs from CDFRDL work
  - Consultation on service name based fail over pending
    - *No longer a priority. D0 may move away from cluster model for due to cluster service failover issues.*
  - Unofficially advise on L3 resource leveling impact and constraints (*e.g. luminosity block related requirements*)
    - If approved this will yield potentially significant request for effort
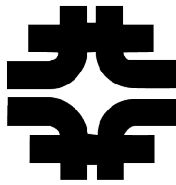
Effort Profile RunII Support (Software)

- 2 employees in CEPA/OAA, additional effort 1 employee in REXX/DHG

Run II Devel and Support
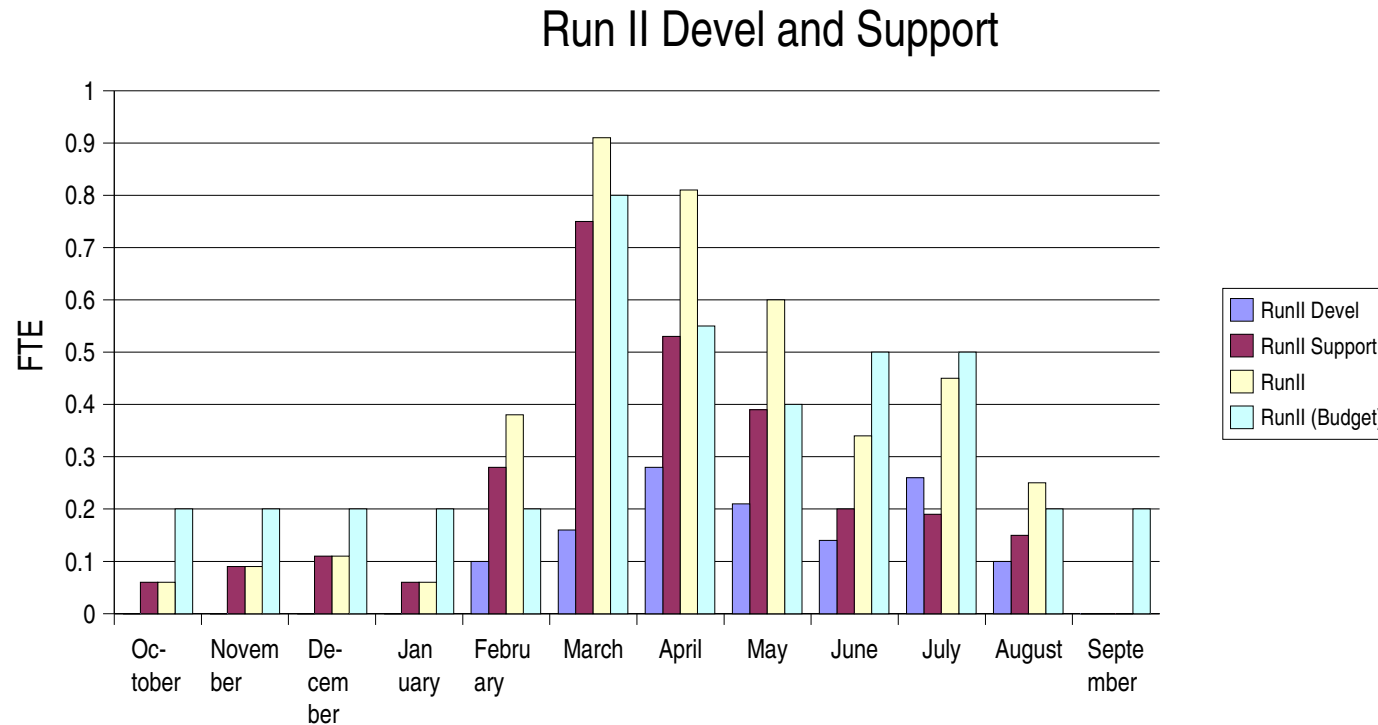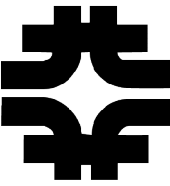
Risks From CDF

- CDF
  - CDFRDL
    - Has all the risks of supporting a new product in production
    - Long backlog load on system under some conditions (investigating phase space)
    - Violation of claimed uniqueness may require changes
    - Small file sizes compared to design at high data would rates impose significant additional load
    - Throttling may need to be enhanced
    - Proliferation to other experiments or aspects of experiment may require refactoring and moving away from forked code model.
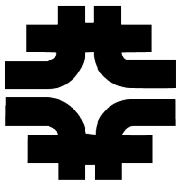
Risks from D0

- D0
  - Most of the technical experts have been lost to attrition over several years
  - Remaining experts reside in different departments
    - coordination, authority, responsibility
- New hardware or library dependencies could require significant effort
- New features or upgrades means potential new instabilities
  - Older versions have been running for years
- Higher luminosity may provoke new issues
  - Resource leveling in L3 potentially large impact (need to keep eyes open and ear to the rails)
- Problems now rare (great!)
  - potential for loss of expertise (not so great)